

Department of Energy

§ 431.132

§ 431.107 Uniform test method for the measurement of energy efficiency of commercial heat pump water heaters. [Reserved]

ENERGY CONSERVATION STANDARDS

§ 431.110 Energy conservation standards and their effective dates.

Each commercial storage water heater, instantaneous water heater, unfired hot water storage tank and hot water supply boiler¹ must meet the applicable energy conservation standard level(s) as follows:

| Product | Size | Energy conservation standard ^a (products manufactured on and after October 29, 2003) ^b | |
|---|---------------------|--|-----------------------------------|
| | | Minimum thermal efficiency | Maximum standby loss ^c |
| Electric storage water heaters. | All | N/A | $0.30 + 27/V_m$ (%/hr) |
| Gas-fired storage water heaters. | ≤155,000 Btu/hr ... | 80% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| | >155,000 Btu/hr ... | 80% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| Oil-fired storage water heaters. | ≤155,000 Btu/hr ... | 78% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| | >155,000 Btu/hr ... | 78% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| Gas-fired instantaneous water heaters and hot water supply boilers. | <10 gal | 80% | N/A |
| | ≥10 gal | 80% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| Oil-fired instantaneous water heaters and hot water supply boilers. | <10 gal | 80% | N/A |
| | ≥10 gal | 78% | $Q/800 + 110(V_r)^{1/2}$ (Btu/hr) |
| Product | Size | Minimum thermal insulation | |
| Unfired hot water storage tank. | All | R-12.5 | |

^a V_m is the measured storage volume and V_r is the rated volume, both in gallons. Q is the nameplate input rate in Btu/hr.

^b For hot water supply boilers with a capacity of less than 10 gallons: (1) the standards are mandatory for products manufactured on and after October 21, 2005, and (2) products manufactured prior to that date, and on or after October 23, 2003, must meet either the standards listed in this table or the applicable standards in subpart E of this part for a "commercial packaged boiler."

^c Water heaters and hot water supply boilers having more than 140 gallons of storage capacity need not meet the standby loss requirement if (1) the tank surface area is thermally insulated to R-12.5 or more, (2) a standing pilot light is not used and (3) for gas or oil-fired storage water heaters, they have a fire damper or fan assisted combustion.

[69 FR 61983, Oct. 21, 2004; 69 FR 63574, Nov. 2, 2004]

Subpart H—Automatic Commercial Ice Makers

SOURCE: 70 FR 60415, Oct. 18, 2005, unless otherwise noted.

§ 431.131 Purpose and scope.

This subpart contains energy conservation requirements for commercial ice makers, pursuant to Part C of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6311–6317.

¹ Any packaged boiler that provides service water, that meets the definition of "commercial packaged boiler" in subpart E of this part, but does not meet the definition of "

§ 431.132 Definitions concerning automatic commercial ice makers.

Automatic commercial ice maker means a factory-made assembly (not necessarily shipped in 1 package) that—

(1) Consists of a condensing unit and ice-making section operating as an integrated unit, with means for making and harvesting ice; and

(2) May include means for storing ice, dispensing ice, or storing and dispensing ice.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially

hot water supply boiler" in subpart G, must meet the requirements that apply to it under subpart E.